

REMARKS

Claims 1-27, all the claims pending in the application, stand rejected on prior art grounds. Applicants respectfully traverse these rejections based on the following discussion.

I. The Prior Art Rejections

Claims 1-27 stand rejected under 35 U.S.C. §103 as being unpatentable over Jones et al. (hereinafter "Jones") in view of Gustafson et al. (hereinafter "Gustafson"). Applicants respectfully traverse this rejection because neither reference teaches or suggests the claimed "segmented data line" defined by independent claims 1, 8, and 14, much less the "data propagators" that are positioned between segments of the segmented data line. Further, none of the prior art of record teaches or suggests the claimed methods of "propagating" data portions along a segmented data line that are defined by independent claims 20 and 25.

While the Office Action proposes that Jones teaches a segmented data line with data positioned between segments of the segmented data line, the actual disclosure of Jones only discusses standard uninterrupted buses. For example, as shown Figure 15 of Jones, a number of wiring connections and buses, such as items 15, 26, 29, 31, 33, 38, etc., are illustrated. A number of other buses and wiring connections are illustrated in the remaining drawings. However, none of these buses or wires are described as being segmented in any manner. Quite the contrary, Jones describes its communication processes as utilizing uninterrupted buses.

In Jones, the communication occurs when one item transfers data packets to another item. In this process, the data packet is sent from one item to another item and then a receipt is provided back to the sending device to let the sending device know that the packet was received. (column 3, lines 43-56 of Jones). Thus, in Jones, the packet is sent along a continuous, non-segmented path to the destination device while that bus is reserved for the specific communication between the two devices.

There is no discussion within Jones of segmenting this packet transmission process in any manner. To the contrary, in Jones, an individual data path is specifically reserved for different types of data packets, each of which is given a different priority along the data path. For example, Jones describes one situation where the data transfer packets are used for memory access operations and there are event packets of two types (column 3, lines 43-56). In Jones, normal event packets form prioritized interrupts which may be received by the CPU or module with the recipient selectively deciding whether, or when, to respond to the event packet depending on relative priority with other activities requested at that device. Special event packets form command control signals which must be acted on by the recipient device when the special event packet is received. In this embodiment in Jones, modules 14 as well as the CPU 12 have event logic for handling event packet formation and receipt including normal events acting as interrupt requests as well as special events acting as control commands.

Further, Jones describes that the preferred embodiment illustrated in FIG. 1 comprises a single integrated circuit chip 11 on which is provided two CPU circuits 12 and 13 as well as a plurality of modules 14. The CPU's 12 and 13 as well as each module 14 are interconnected by a bus network 15 having bi-directional connections to each module. In this example, the bus network is referred to as a P-link consisting of a parallel data bus 20 as shown in FIG. 2 together with a dedicated control bus 21 provided respectively for each module so as to link the module to a P-link control unit 22. Each module is provided with a P-link interface 23 incorporating a state machine so as to interchange control signals between the respective P-link control line 21 and the interface 23 as well as transferring data in two opposing directions between the data bus 20 and the interface 23 (column 3, line 60-column 4, line 9). Therefore, Applicants submit that Jones clearly describes a structure that only uses uninterrupted buses that completely transmit each packet data and wait for a return acknowledgement that the data packet was received before supplying additional packets of data. Thus, Jones does not teach or suggest in any manner the claimed "segmented data line."

In addition, Applicants note that it is very difficult to interpret what portion of Jones the Office Action relies upon for teaching the claimed "segmented data line" and the other claimed

elements because the Office Action merely makes reference to Figures 1-27 (all the figures) of Jones, and does not make specific reference to any portion of the written specification of Jones. A keyword search of Jones reveals that the term "segmented" (and its derivatives) does not appear anywhere in the document.

While Figure 1 of Jones is discussed in detail above, the remaining drawings and discussion of Jones only illustrates continuous and uninterrupted signal and transfer lines and buses. For example, Figure 2 illustrates signal lines 20, 21, 61, 63, 64, etc.; Figure 3 illustrates transfer bus 83 and data line 93; Figure 4 similarly illustrates transfer bus 71 and data line 93; Figure 5 illustrates read and write lines 90, 95, data line 93 and address line 91. The remaining Figures similarly show uninterrupted, continuous, non-segmented buses and signal lines. Thus, Applicants submit that Jones does not teach or suggest the claimed "segmented data line" much less the remaining features and methodology defined by Applicants' independent claims 1, 8, 14, 20, and 25.

Gustafson is referenced for the limited purpose of showing data propagators; however while Gustafson uses the term "propagation" and illustrates a "propagation" unit 38 in Figure 1A of Gustafson, the type of propagation being discussed in Gustafson is completely irrelevant to the claimed invention. More specifically, the claimed invention defines propagators that propagate data along a segmented data line, while the propagation unit within Gustafson relates to a state vector estimate that is updated based on the use of nonlinear stochastic differential equations for propagating the first two conditional moments of the state vector, given the past measurement history (column 3, lines 61-64 of Gustafson). More specifically, in column 5, lines 18-21, Gustafson describes that its system includes a "propagator" for applying sensed inertial data to a dynamic model based on a recently updated navigation state to generate updated inertial data, which is in turn provided to the measurement update unit. This is in no way equivalent to the claimed data propagator that is adapted to propagate data along a segmented data line. Therefore, not only is Gustafson not properly combinable with Jones, Gustafson does not teach the element for which it is referenced.

In view of the foregoing, it is Applicants position that the rejection is defective because neither Jones nor Gustafson relate even tangentially to the claimed invention, or to each other, and are therefore not properly combinable. Further, even if one ordinarily skilled in the art had made reference to the applied references, the combination does not teach or suggest the invention defined by independent claims 1, 8, 14, 20, and 25. Thus, it is Applicants position that independent claims 1, 8, 14, 20, and 25 are patentable over the prior art of record. Further, dependent claims 2-7, 9-13, 15-19, at 21-24, and 26-27 are also patentable over the prior art of record not only by virtue of their dependency from a patentable independent claim, but also by virtue of the additional features of the invention they define. In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw this rejection.

II. Formal Matters and Conclusion

In view of the foregoing, Applicants submit that claims 1-27, all the claims presently pending in the application, are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary.

Please charge any deficiencies and credit any overpayments to Attorney's Deposit
Account Number 09-0456.

Respectfully submitted,

Dated: 8/10/04



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